Distr.: General
14 June 1999
Original: English

THIRD UNITED NATIONS CONFERENCE ON THE EXPLORATION AND PEACEFUL USES OF OUTER SPACE

Vienna
19-30 July 1999

Abstract of the national paper of Iraq

Peaceful use of space technologies in Iraq: under United Nations embargo, a problem to be solved

I. Introduction

1. Iraq is a founder member of the United Nations and was one of the first countries to join many of its scientific organizations and committees. It had an active presence in meetings, functions and conferences relating to space activities and space research in the past. Iraq had ambitious programmes for space research and applications, but with the state of embargo imposed on Iraq for the past nine years, a large knowledge gap between Iraq and the rest of the world has been created, with academic and scientific activities greatly reduced and participation in international conferences and meetings practically diminished.

2. It is regrettable that very little scientific research in general and space research in particular is currently being conducted in Iraq. Acquisition of scientific papers and technical information is extremely difficult, if not impossible, training opportunities are scarce, if not completely denied to Iraq either deliberately by some countries or because of the lack of hard currency. In spite of these difficulties, however, some activities are still being carried out.

3. Continuation of those activities and other scientific and technical functions are essential for the welfare of the people of Iraq and international assistance and cooperation are much needed.

II. Telecommunications

A. Status before 1990

4. Before 1990 Iraq used to have four main satellite Earth stations, of which two operated, in coordination with the International Telecommunications Satellite Organization, in conjunction with satellites located over the Atlantic and Indian Oceans. One operated with the International Organization of Space Communications (INTERSPUTNIK) satellite system and one with the Arab Satellite Communication Organization (ARABSAT) satellite system.

Between them, the four satellite Earth stations connected Iraq with numerous telecommunication centres around the globe.

5. The total capacity of the system was equivalent to more than 700 analog telephone channels providing reasonable telephony, facsimile and telex services that were just about adequate at the time.

B. Future plans as of 1990

6. Despite the borderline adequacy of what existed in 1990, Iraq had very ambitious plans to modernize its satellite communication infrastructure by changing completely to digital systems and adding new systems that were to be completely up to date at the time. The transfer from the old analog frequency division multiplexing/frequency division multiple access (FDM/FDMA) system to its new ADR digital successor was the first task at hand. A contract was under serious negotiation with a number of European and Japanese companies. In addition, Iraq was seriously considering the use of a national domestic satellite system to fulfil the needs of television and audio programme distribution and general telecommunications throughout the country. One of the prime uses of such a system was planned to be tele-education and learning and anti-illiteracy campaigns.

7. Iraqi plans in the domestic satellite area were twofold. The first was to rent one or two satellite transponders aboard one of the international or regional satellites that cover Iraq. The second was to acquire and put into orbit a national satellite of its own. For that purpose, in particular, Iraq in 1988 initiated an advanced publication procedure with the International Telecommunications Union to coordinate and reserve an orbital satellite position in the geostationary satellite orbit. In addition, Iraq had plans to go into the very small aperture terminal (VSAT) system to quickly provide specialized telecommunication services such as data and facsimile.

C. Condition after 1990 till now

8. The destruction suffered by satellite communication facilities in the 1991 war was very severe. Iraq has nevertheless managed to rehabilitate some of the hardware and restore in part some communication capacities through the use of spare parts that were available and what parts it was possible to manufacture locally.

9. However, as the years passed and with the embargo still imposed on Iraq, lack of spare parts has affected both the quantity and the quality of the telecommunication channels available with the outside world. The effect on quality has meant that facsimile and data services were very difficult to use and sometimes not available.

10. The effect on the quantity has meant long delays in trying to establish international telephone connections. This situation has severely affected many essential activities in Iraq. In addition, the continuation of the embargo has resulted in the limitation of Iraq's ability to continue to maintain adequate international communications in the near future.

III. Earth matters

11. In spite of enormous difficulties, activities have still been carried out in recent years, especially in the field of remote sensing. The following projects are some examples:

(a) The use of remote sensing data for crop estimations for the years 1988-1990 for wheat and barley;

(b) Land cover classifications for land resource inventories in the Mesopotamian Plain;

(c) Land use maps for Iraq;

(d) Determination of bodies of water and surface water inventory and reservoir mapping;

(e) The locations of springs, seeps and shallow water-tables;

(f) Soil degradation and desertification by sand dunes;

(g) Mapping the areas affected by the flooding of the Tigris and Euphrates rivers;

(h) Geological maps for Iraq on the scale of 1:100,000;

(i) Mapping of old irrigation canal systems and archaeological sites in Mesopotamia.

12. Continuation of these and other activities is essential for the welfare of Iraq's people and especially for food security, for which international assistance and cooperation such as training and the supply of recent space images of Iraq are needed.

IV. Research and related subjects

13. Information acquisition for universities and research establishments is discussed in this section.

14. Knowledge transfer, information-sharing, joint research activities, remote education and so on are denied to Iraq either because of the embargo or because of degraded communication links with the outside world, which are heavily dependent on satellite communications and space links.

15. Research and teaching is still conducted using the technology of the 1970s and 1980s. Exchange programmes between scientists are unavailable and joint research, especially on space matters, is non-existent.

16. Invitations for Iraqi scientists to attend conferences on space and related matters are scarce and, if made, no financial assistance is ever given, although Iraq has frozen hard-currency funds in nearly all countries and has no available funds of its own locally.

17. Conditions for attending training courses, if and when offered, are formulated in such a way that no Iraqi engineer, technician or student is ever likely to be offered a chance to attend.

V. Recommendations

18. The following recommendations are presented below:

(a) Iraq strongly supports the establishment of a regional centre for space science and technology education for the region of western Asia. Iraq is willing to participate actively in achieving this objective together with the countries of the region and the Office for Outer Space Affairs of the United Nations Secretariat;

(b) Major space Powers are requested to share space knowledge and to exchange data and other related space benefits with developing countries in a non-discriminatory manner, thus bridging the gap between developed and developing countries;

(c) Iraq recommends the establishment of a cooperative information network to strengthen relationships between scientists, educationalists, professionals and decision makers in the region of western Asia;

(d) Iraq would hope to benefit from the recommendations formulated by the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, held in 1982, and mentioned in the report of the Scientific and Technical Subcommittee on its thirty-fourth session (A/AC.105/672), especially with regard to the following:

(i) Technology transfer to developing countries without undue restrictions;

(ii) Supporting space technology projects in developing countries financially, technically and otherwise, to allow those countries to gain direct experience in the application of space technology;

(iii) Financially backed scholarships for Iraqis to attend training programmes and to study at all levels of education, to carry out postdoctoral research and to participate in exchanges of scientists and other related activities.